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CENTRAL INTELLIGENCE AGENCY

REPORT

John G.

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INFORMATION REPORT

COUNTRY USSR

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SUBJECT

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Optical Laboratories

NO. OF ENCLS.
(LISTED BELOW)

PLACE ACQUIRED

SUPPLEMENT TO
REPORT NO.

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DATE OF

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THIS IS UNEVALUATED INFORMATION

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The difficulties encountered by ZEISS staff in LENINGRAD seem to have been due for the most part to Russian incompetence.

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Brief cases and personal working equipment such as slide rules were not allowed in the factory and the low technical standard of the Russians was a stumbling block.

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25 YEAR RE-REVIEW

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SCIENTIFIC ORDER OF BATTLE

A. ESTABLISHMENTS

1A. State Optical Institute, LENINGRAD

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It is called the G.O.I. (GOSUDARSTVENNIY OPTICHESKIY INSTITUT). The Institute has apparently been extraordinarily well-equipped with apparatus taken away from CARL ZEISS, JENA and ZEISS IKON, DRESDEN. 25X1
the scientists there are able men by Russian standard. All have a good reputation in Russian technical circles; one SVENITZKY, received a Stalin prize.

For personalities see Section B.

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2A. Optical and Mechanical Works No 349, LENINGRAD

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This complex is divided into two factories. GOMS L.44 and Progress Factory, LENINGRAD

The distribution of German technical staff between the two factories is shown in Section B.

Above the Works Director and his Directorate is the "PARTKOM", that is 25X1
the Party Commission and the "PROFCOJUS", that is, the Trade Union management. In the individual departments "PARTORGS" have more power than departmental heads; many "PARTORGS" are women.

In addition to the Works Director there are -

Chief Engineer i/c Drawing and Planning Offices,
Chief Mechanical Engineer i/c Workshops,
Chief Power Engineer i/c Fuel and Power,
Administration Director,
Personnel Director - The Personnel Director is also Head of the Secret Department
Supply Director.

It is estimated that 2% or 3% of the department staffs are engaged on full-time Party or Trade Union work and about the same proportion on part-time similar work. However, for working time taken off in trade union or party work overtime must be worked.

There is also a department for technical acceptance, the OTK. Until its inspectors have finally passed and certificated a product the salaries and wages of the staff concerned in its manufacture cannot be paid.

3A. ZEISS Groups in LENINGRAD

Broadly speaking, there were the following main groups:

- (a) Design of astronomical equipment
- (b) Design of optical war equipment such as range finders, periscopes.
- (c) Design of measuring equipment (fine measurement for technical and scientific purposes) as well as of spectrographic and spectrescopic instruments.
- (d) Laboratory work for photography, spectrography, electro-technics, machine tools and standardization of optical equipment.
- (e) Skilled workers for various workshops.

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Within the groups of designers there were sub-groups with leaders and these had to develop the designs demanded by their Russian superiors. These tasks were usually given a date for completion. The Russian contribution was very little, mainly detailed drawing.

Designers were given a number of interpreters, mostly women and these were controlled by Chief Interpreter FRIEDEL (by occupation a boilermaker): FRIEDEL seemed to have control also of the designers themselves at different times. As a rule however, it was left to the designers to work on the set tasks as they thought fit. In the case of the astro designers, however, there was often direction by Russian astronomers (Professor MATSUTO) who introduced, or inspired, new designs.

Those engineers who had the task of designing war equipment were accommodated in a special room. Until September 1951 they were employed on designing range finders and periscopes. Their last task was then the design of an ultra-modern super-performance grating divider, under the scientific guidance of a Russian scientist for defraction gratings. Several Germans had the opinion that this Russian (name not known) is very well-informed in this special branch of science.

The laboratories were planned, equipped and worked up by the German teams under most difficult conditions. Appliances and aids were not available and the simple instruments and machinery had to be thought out, designed and laboriously constructed by the men themselves. In other ways, too, the skilled technical staff were the very soul of the laboratories (of which three were under female management). All initiative emanated from the German specialists and this was always acknowledged by laboratory staffs, including the Russian managers. The women in particular, it is said, were brought to tears when the Germans left, as they could see the difficulties ahead. Each German specialist had a free hand and authority, and, except in very isolated cases, cooperation gave no rise to friction.

The main tasks of the various laboratories were:-

(a) Sensitometric measurements and the production of sensitometer standards, the production of mercury conductors, photographic scales.

Leader: Dipl Ing FALTA

(b) Production of photo elements; cathode spraying for light filters on quartz and glass, gradation filters, grey filters and wedges.

Leader: Herr HOHMANN.

(c) Spectro-chemical works analysis for foundry and workshops, checking electrical impulse equipment, research work on sources of light for spectro-chemistry. Instruction and guidance for spectro-chemists.

Leader: Herr POLACK

(d) Checking optical appliances, working out adjustment devices, checking optical components, quartzes, sylvites, fluorspar and the like.

Leader: Herr VOIGTSBERGER.

The laboratory assistants were nearly all women. The German laboratory specialists had a constant struggle against disorder which seems to be a Russian characteristic. The opinion is also held that the German effort will not leave any tangible results as the laboratories and instruments will fall into disruption.

"Express laboratory" for the spectro analysis of metals was established. The purpose of this was to acquaint Russians with the subject and to introduce modern processes of examination. Apart from the tremendous difficulties attached to building and equipping the laboratory very many obstacles had to be overcome when the assistants were receiving instruction. In many cases,

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there was no knowledge even of first principles and also the scrappy theoretical training could not make up for the complete lack of practical experience.

After about a year a regular works analysis service was achieved and then the perfecting of equipment was undertaken, that is, automatic control equipment was designed as well as a large number of mechanical and electrical aids. When these were made the laboratory came into use.

A further important task was the development of a process for the rapid analysis of bronzes of varied composition; the problem was the elimination of the so-called "disturbing influence" of third-alloy components. After two years' hard work near-success was achieved. Shortly afterwards POLACK was brought back to Germany to the great regret of the Russian leader, VORONZOV, who intends to write his doctor's thesis on the two years' work on this problem.

B. PERSONALITIES1B. Soviet Personalities in the G.O.I.1. Professor PROKOFIEF

[redacted] 25X1

2. SVENTILSKY

[redacted] 25X1

3. TAGANOV4. PODMOSHENSKY

[redacted] 25X1

2B. Other Soviet Personalities

1. Professor MANDELSTAMM	MOSCOW	- Spectrography
2. Professor LANDSBERG	- LENINGRAD	- Spectrography
3. Professor FRISCH	- MOSCOW	- Spectrography
4. Professor GROSS	- LENINGRAD	- Frame Spectrography
5. Professor PROKOFIEF	- LENINGRAD	- Spectrography
6. SVENTILSKY	- LENINGRAD	- Spectrography
7. RAISKI	- LENINGRAD	- Spectrography
8. MATSUTO	- LENINGRAD	- Astronomy
9. Professor SENA	- LENINGRAD	- Gas discharge
10. Professor JOFFE	- LENINGRAD	- Atomic physics

3B. Russian Leadership in Works 349, LENINGRAD

1. Works Director:	- SEMYONOV, relieved by..
2. Chief Engineer:	- POTAPOV
3. Head of the Drawing Offices:	- ARKHIPOV
4. Personnel Director:	- SMIRNOV (NKWD Officer)
5. Head of Optical Laboratories:	- SHOSHIN
6. Head of Works Laboratories:	- MURAVEISKY, relieved by Deputy SAITSEV
7. Head of Astro-design Office:	- DOBIDSHIN
8. Head of Optical Checking Laboratory	- MOSKALOVA
9. Head of the Sensitometric Laboratory	- SMIRNOVA
10. Head of the Photo-element Laboratory:	- AKHREMCHIK
11. Head of the Spectrographic "Express Laboratory":	- VORONTSOV
12. Head of Interpreters:	- FRIEDEL

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4B. ZELSS Specialists in LENINGRAD
Repatriated from Progress Factory (16 specialists) 35 persons
altogether)

1. Prof Dr HAUSER

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2. MEHLIS - Laboratory leader and well-informed.
3. fmu BAEZ - In a workshop
4. " LAUERWALD - In a workshop
5. " OEHLER - In a workshop
6. " AUSCHUTZ - In a workshop
7. " SCHRAMM - In a workshop
8. " VORDANK -
9. " KOENIG - In a workshop
10. " RANKE -
11. " VOGLER - In a workshop
12. " GERSTENBERGER - Chief designer, generally well-informed
13. " FRIEBEL - In a workshop
14. " ZWIGARD - In a workshop
15. " PRUEFE -
16. " KEITEL -

Repatriated from Factory GOMS - 18 (49 persons)

1. Dipl Ing FALTA - Laboratory leader
2. fmu HOHMANN - Laboratory leader
3. " JOST - Workshop
4. " BRUECKHER - Workshop
5. " BARNST - Workshop
6. " GEBAUER - Workshop
7. " JANIAK - Workshop
8. " BUETTNER - Good all-round engineer
9. " HARNACK - Workshop
10. " WIENER - Workshop
11. " GEIST - Workshop
12. " STANDAU - Workshop
13. " RUDOLF - Workshop
14. " ULBRIGHT - Workshop
15. " SALZMANN - Workshop
16. " FAERBER - Workshop
17. " HAEDRICH - Workshop
18. Kurt POLACK - Laboratory leader

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Remained in LENINGRADFrom Progress Factory - 1 specialist (1 person)

1. fmu NOAK - Master painter from GOMS - Factory 36

From GOMS Factory - 31 specialists (91 persons)

1. Georg MANN - Astro design
2. Herbert LIER - " "
3. fmu SIEFERT - " "
4. " WOIZAN - " " and all-round technical experience.
5. Georg GUENZERODT - " "
6. Karl BIERLICH - " "
7. Antor GIERDAL - " "
8. fmu VOIGTLAENDER - Instrument design
9. Ernst LEO - " "
10. Willi DIETZEL - Precision instrument design (clever)
11. Wilhelm HENSE - " " " "
12. fmu FROSCH - " " " "
13. " PULZ - War equipment design (Group leader)
14. " KRESSE - " " " "
15. Alfred KASCHLIK - " " " "

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16. Franz SOELDNER
 17. Paul GROSSE
 18. Hans SCHUBERT
 19. Emil KETTLER
 20. fnu SCHMUTZLER
 21. " SCHNERR
 22. " FRITSCH
 23. Hermann FRIEBE

24. fnu DIETRICH
 25. " WEBER
 26. " FOCKE
 27. " REHM
 28. " HAHNEMANN
 29. " ROESCHKE
 30. Dr fnu KUEHNE
 31. Kurt VOIGTSBERGER
 32. fnu PFAFF
 33. Hans Gert WITLICH
 34. Kurt JOHN
 35. Arno SIEDER
 36. fnu STRAUBE

- War equipment design
 - " " "
 - " " "
 - " " "
 - " " (foreman)
 - " " (foreman)
 - " "
 - War equipment design.

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- War equipment design
 - " " "
 - " " "
 - " " "
 - " " "
 - " " "
 - " " "
 - Scientist. Well-informed on many construction designs from ZEISS.
 - Laboratory leader
 - Workshop laboratory for Astro Optics.
 - Mechanic (#ad status of designer in MOSCOW)
 - Quartz specialist from STAAKEN.

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- Quartz-maker from SCHIEDEFELD.
 - War equipment design.

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